

POWER PLANT - ELECTRICAL HARNESS - INTRODUCTION OF PRODUCTION STANDARD EEC HARNESS TO SUIT FCOC FUEL TEMPERATURE THERMOCOUPLE WITH STUD TYPE THERMOCOUPLE - CATEGORY CODE 7 - MOD.ENG-71-0183

#### 1. Planning Information

#### A. Effectivity

- (1) Aircraft: (a) Airbus A319
  - (b) Airbus A320
  - (c) Airbus A321
  - (d) McDonnell Douglas MD-90
- (2) Engines: (a) V2522-A5 Engines prior to Serial No.V10154
  - (b) V2524-A5 Engines prior to Serial No.V10154
  - (c) V2527-A5 Engines prior to Serial No.V10154
  - (d) V2530-A5 Engines prior to Serial No.V10144
  - (e) V2525-D5 Engines prior to Serial No.V20037
  - (f) V2528-D5 Engines prior to Serial No.V20037

### B. Concurrent Requirements

This Service Bulletin must be fitted to engines which embody IAE V2500 Service Bulletin ENG-73-0071 or ENG-73-0075. (Refer to 1.L.)

### C. Reason

#### (1) Condition

Category II fault messages for the fuel temperature have occured on in-service engines.

The problem is caused by resonance of the right-angled backshell of the fuel thermocouple on the EEC harness - Loom C.

### (2) Background

As (1) above.

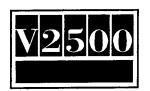
### (3) Objective

The purpose of this Service Bulletin is designed to maintain reliability.

## (4) Substantiation

A satisfactory engineering analysis has been done on the changes introduced by this Service Bulletin. Tests on development engines included a full 150 hour modification type test.

(5) Effect of Bulletin on Workshop procedures:



Removal/Installation Affected
Disassembly/Assembly Not affected
Cleaning Not affected
Inspection/Check Not affected
Repair Not affected
Testing Not affected

(6) Supplement Information

None.

#### D. <u>Description</u>

- (1) The changes introduced by this Service Bulletin are as follows:
  - (a) The harness assembly has changed, the changes are as follows:

A5 Model

- (i) An additional thermocouple harness is introduced, with 4 integral terminal tags.
- (ii) The connector plug assembly at position 4017KS-A is deleted along with all of its constitutional parts.

D5 Model

- (iii) Two additional thermocouple harnesses are introduced, with 4 integral terminal tags.
- (iv) The connector plug assembly of position P1-8050 is deleted along with all of its constituent parts.

#### E. Approval

The part number changes and/or part modifications are given in section 2 and 3 of this Service Bulletin. They obey the federal aviation regulations and are FAA-APPROVED for the engine model listed.

#### F. Compliance

Category Code 7

This Service Bulletin can be done when there are no initial parts remaining.

#### G. Manpower

Estimate of man-hours necessary to do this Service Bulletin in full:



### SERVICE BULLETIN

Venue Estimated Man-hours

(1) In service .. .. Not applicable

(2) At overhaul .. .. Not affected

NOTE: It is possible to get access to the parts affected by this Service Bulletin at overhaul.

- H. Material Price and Availability
  - (1) A modification kit is not necessary.
  - (2) See "Material Information" section for prices and availability of spares.
- I. Tooling

Special tools are not necessary.

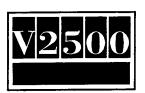
- J. Weight and Balance
  - A5 Model
  - (1) Weight change .. .. Minus 0,05 kg (0.1lb.)
  - (2) Moment arm .. .. 584 mm (23.0in.) forwards
  - (3) Datum .. .. Engine front mount centreline (Power Plant Station PPS 100)
  - D5 Model
  - (1) Weight change .. .. Minus 0,05 Kg (0.1lb.)
  - (2) Moment arm .. .. .. 348 mm (13.7in.) forwards
  - (3) Datum .. .. .. Engine front mount centreline (Power Plant Station PPS 100)
- L. References
  - (1) Internal Reference No.

EC95VR012

EC95VR012A

EC95VR012B

(2) Other References



### SERVICE BULLETIN

The IAE V2500 Service Bulletin that follows must be installed before this Service Bulletin:

ENG-73-0071 Engine - Fuel and Control - Replacement of fuel temperature thermocouple with stud and nut terminations.

or

ENG-73-0075 Power Plant - EEC Fan Harness - Introduction of EEC Harness to suit FCOC fuel temperature thermocouple connector with stud type terminals.

The V2500 Engine Manual, Chapter/Section 72-00-32, Removal/Installation.

### M. <u>Publications affected:</u>

- (1) The V2500 Illustrated Parts Catalog, Chapter/Section 71-51-41 and 71-51-59.
- (2) The V2500 Engine Manual, Chapter/Section 72-00-32, Removal/Installation.



# **SERVICE BULLETIN**

### 2. Accomplishment Instructions

A. Rework Instructions

None.

- B. Assembly Instructions
  - (1) For the correct installation procedure for the harnesses refer to the V2500 Engine Manual, Chapter/Section 72-00-32, Removal/Installation.
- C. Recording Instructions
  - (1) A record of accomplishment is necessary.

### 3. Material Information

Applicability: For each V2500 Engine to incorporate this Bulletin.

### A. <u>Kits associated with this Bulletin:</u>

None

### B. Parts affected by this Bulletin:

| New       |     | Est'd      |         | Old       |              |
|-----------|-----|------------|---------|-----------|--------------|
| Part No.  |     | Unit       |         | Part No.  | Instructions |
| (ATA No.) | Qty | Price (\$) | Keyword | (IPC No.) | Disposition  |

A5 Model

For engines incorporating EC93VR081 but not EC93VR058 and EC94VR052

| 6A6441     | 1 | Harness assy - EEC Fan | 6A5556   | (S1)(K) |
|------------|---|------------------------|----------|---------|
| (71-51-41) |   |                        | (01-005) |         |

For engines incorporating EC94VR052

| 6A6439<br>(71-51-41) | 1   | 52340.00 | Harness assy - EEC Fan | 6A5963<br>(01-005)              | (A)(B)(S1)         |
|----------------------|-----|----------|------------------------|---------------------------------|--------------------|
| -<br>(71-51-41)      | 1   |          | Clamp, backshell       | ESC66E14<br>(03-410)            | (C)(H)(1D)         |
| -<br>(71-51-41)      | 1   | 4.56     | Bush-cable support     | ESC53-28<br>(03-817)            | (F)(2D)            |
| -<br>(71-51-41)      | 1   |          | Connector              | ESC10SE614<br>07SN0<br>(04-410) | (C)(H)<br>(1D)     |
| -<br>(71-51-41)      | 3   |          | Contact, socket        | ESC30S16BC<br>(04-417)          | (C)(H)<br>(1D)     |
| -<br>(71-51-41)      | 2   |          | Socket - contact       | BT4116-<br>10PY165<br>(04-427)  | (C)(H)<br>(S2)(1D) |
| -<br>(71-51-41)      | Ref |          | Socket - contact       | BT4116-10P<br>(04-427)          | (C)(H)<br>(S2)(1D) |
| -<br>(71-51-41       | 2   |          | Socket - contact       | BT4116-<br>10RY165<br>(04-428)  | (C)(H)<br>(S3)(1D) |

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# **SERVICE BULLETIN**

| _<br>(71-51-41         | Ref |          | Socket - contact  | BT4116-10R<br>(04-428)          | (C)(H)<br>(S3)(1D) |
|------------------------|-----|----------|---|---------------------------------|--------------------|
| -<br>(71-51-41)        | 3   |          | Plug Sealing  | MS3187-<br>16-2<br>(04-429)     | (C)(H)<br>(1D)     |
| HAB22416<br>(71-51-41) | 2   |          | Lead assy, thermocouple                                       | -<br>(04-900)                   | (A)(F)(J)          |
| D5 Model               |     |          |   |                                 |                    |
| 6A6440<br>(71-51-59    | 1   | 20650.00 | Harness assy – fan case<br>EEC common channel<br>A/B – Loom C | 6A4428<br>(01-005)              | (A)(B)(S1)         |
| HAB22497<br>(71-51-59) | 1   |          | Harness   | -<br>(03-505)                   | (A)(G)(J)          |
| HAB22498<br>(71-51-59) | 1   |          | Harness   | -<br>(03-506)                   | (A)(G)(J)          |
| -<br>(71-51-59)        | 1   |          | Bush - cable support  | ESC53-28<br>(03-818)            | (E)(H)<br>(1D)     |
| -<br>(71-51-59)        | 1   |          | Connector   | ESC10SE614<br>07SN0<br>(04-210) | (E)(H)<br>(1D)     |
| -<br>(71-51-59)        | 3   |          | Contact, socket   | ESC30S16BC<br>(04-218)          | (E)(H)<br>(1D)     |
| -<br>(71-51-59)        | 2   |          | Contact, socket   | ESC30S16NC<br>(04-219)          | (E)(H)<br>(1D)     |
| -<br>(71-51-59)        | 2   |          | Contact - socket  | ESC30S16NA<br>(04-220)          | (E)(H)<br>(1D)     |
| -<br>(71-51-59)        | 1   |          | Backshell   | ESC66D14<br>(04-225)            | (E)(H)<br>(1D)     |
| -<br>(71-51-59)        | 3   |          | Plug  | BT4016-60P<br>(04-990)          | (E)(H)<br>(S4)(1D) |
| -<br>(71-51-59)        | Ref |          | Plug  | 3400-152-<br>016<br>(04-990)    | (E)(1D)<br>(S4)    |



NOTE: The 1997 unit prices shown are an estimate and they are given for the purpose of planning only. For information about actual prices, refer to the IAE Price Catalog or contact IAE's Spare Parts Sales Department.

#### C. <u>Instructions/Disposition Codes:</u>

- (A) New part is currently available.
- (B) Old part will be discontinued.
- (C) Previously part of Harness assembly 6A5963.
- (E) Previously part of Harness assembly 6A5963.
- (F) Part of Harness assembly 6A6439 and 6A6441.
- (G) Part of Harness assembly 6A6440.
- (H) Deleted part.
- (J) Additional.
- (K) New part will not be made available as a replenishment spare.
- (S1) Old and new parts are not interchangeable.
- (S2) Old parts coded (S2) are alternatives.
- (S3) Old parts coded (S3) are alternatives.
- (S4) Old parts coded (S4) are alternatives.
- (1D) Old part may be used up on other applications.
- (2D) Quantity reduced from 9 to 8.